METHODS FOR FORMING ELECTRONIC DEVICES INCLUDING CAPACITOR STRUCTURES

Abstract of the Disclosure

Methods for forming an electronic device can include forming a capacitor structure on a portion of a substrate with the capacitor structure including a first electrode on the substrate, a capacitor dielectric on the first electrode, a second electrode on the dielectric, and a hard mask on the second electrode. More particularly, the capacitor dielectric can be between the first and second electrodes, the first electrode and the capacitor dielectric can be between the second electrode and the substrate, and the first and second electrodes and the capacitor dielectric can be between the hard mask and the substrate. An interlayer dielectric layer can be formed on the hard mask and on portions of the substrate surrounding the capacitor structure, and portions of the interlayer dielectric layer can be removed to expose the hard mask while maintaining portions of the interlayer dielectric layer on portions of the substrate surrounding the capacitor structure. The hard mask can then be removed thereby exposing portions of the second electrode while maintaining the portions of the interlayer dielectric layer on portions of the substrate surrounding the capacitor.

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